COSEWIC
Status Appraisal Summary

on the

Green Sturgeon
Acipenser medirostris

in Canada

SPECIAL CONCERN
2013

COSEWIC
Committee on the Status
of Endangered Wildlife
in Canada

COSEPAC
Comité sur la situation
des espèces en péril
au Canada

COSEWIC status appraisal summaries are working documents used in assigning the status of wildlife species suspected of being at risk in Canada. This document may be cited as follows:

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For additional copies contact:

COSEWIC Secretariat
c/o Canadian Wildlife Service
Environment Canada
Ottawa, ON
K1A 0H3

Tel.: 819-953-3215
Fax: 819-994-3684
E-mail: COSEWIC/COSEPAC@ec.gc.ca
http://www.cosewic.gc.ca

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COSEWIC
Assessment Summary

Assessment Summary – November 2013

Common name
Green Sturgeon

Scientific name
Acipenser medirostris

Status
Special Concern

Reason for designation
This is a large-bodied fish species that is slow to grow and mature. The number of individuals in Canadian waters is unknown, but is undoubtedly not large. This species is globally at risk, and known threats are fisheries by-catch in both Canada and the United States, and habitat loss and degradation owing to water extraction, industrial and recreational development, and construction of dams in the United States where all known spawning locations are found.

Occurrence
British Columbia, Pacific Ocean

Status history
Designated Special Concern in April 1987. Status re-examined and confirmed in November 2004 and November 2013.

COSEWIC
Status Appraisal Summary

Acipenser medirostris
Green Sturgeon — Esturgeon vert

Range of occurrence in Canada: British Columbia, Pacific Ocean

Status History:

Designated Special Concern in April 1987. Status re-examined and confirmed in November 2004 and November 2013.

Evidence (indicate as applicable):

Wildlife species:

Change in eligibility, taxonomy or designatable units: yes ☐ no ☒

Explanation:

The Green Sturgeon is an anadomous species that depends on unobstructed access to marine waters (for growth and maturation) and freshwater habitats (for reproduction). There is no confirmed reproduction within the Canadian range, but the Green Sturgeon's distribution includes coastal marine areas from northern Mexico (30°N) to well into the Bering Sea in western Alaska (~59°N). It is regularly encountered in Canadian marine waters and occasionally in fresh water (Huff *et al.* 2012, Fig. 1). It is known to spawn in the Sacramento-San Joaquin River system (California) and Rogue, Umpqua (Oregon), and Klamath (Oregon and California) river systems in the US.

Range:

Change in extent of occurrence (EO): yes ☐ no ☒ unk ☐

Change in index of area of occupancy (IAO) : yes ☐ no ☒ unk ☐

Change in number of known or inferred current locations*: yes ☐ no ☒ unk ☐

Significant new survey information: yes ☐ no ☒

Explanation:

Data are scarce and there is considerable uncertainty, but available data do not indicate a change in distribution within Canada. Some new data have extended the northern and southern marine distribution limit of the species in North America, but abundances near the range limits are low (Huff *et al.* 2012, Fig. 1). Range maps extended to the 200 m marine isobath, from northern Mexico to western Alaska, but Huff *et al.* (2012) suggested that "the persistent concentration of sturgeon" occurred from about 41–51.5° N and near the San Francisco and Monterey Bays from 36–37° N. In the US, the Green Sturgeon is composed of two distinct population segments (DPSs). A DPS is similar to COSEWIC's definition of designatable unit. There are three known major spawning populations in the northern DPS (the Rogue, Klamath, and Umpqua rivers) and one in the southern DPS (the Sacramento River). Recent reports of juveniles in what were thought to be extirpated spawning populations in three rivers or tributaries in the northern DPS (Eel River and Trinity River (CA), and the Umpqua River (OR)) are contained in Adams *et al.* (2007). It is likely that the majority of Canadian records involve the northern DPS.

Population Information:

Change in number of mature individuals:	yes ☐ no ☒ unk ☐
Change in population trend:	yes ☐ no ☒ unk ☐
Change in severity of population fragmentation:	yes ☐ no ☒ unk ☐
Change in trend in area and/or quality of habitat:	yes ☐ no ☒ unk ☐
Significant new survey information:	yes ☐ no ☒

Explanation:

Data are scarce and there is considerable uncertainty, but there is no indication of a change in distribution or abundance within Canada. There are no reliable population estimates in the US, but the southern DPS is considered to be less abundant and more threatened than the northern DPS (NOAA 2012). There are no directed commercial fisheries for Green Sturgeon in the US, but by-catch occurs in commercial and recreational fisheries for white sturgeon, salmon, and some groundfishes. Catch and by-catch data do not indicate substantial changes in catches, but there was a slight (and statistically significant) increase in Columbia River (WA, OR) Green Sturgeon catch from 1960 to 1992 after which time data are not comparable owing to regulatory changes (closure of fisheries, catch-and-release implementations). The catch-per-unit-effort (CPUE) has been approximately stable in the Yurok Tribal fishery (Klamath River, northern DPS) from 1984 to 2003 after which time changes in the regulatory regime preclude comparisons to earlier times (Adams *et al.* 2007).

DFO data in Canada indicate very little by-catch in the salmon fishery or the Albion test fishery (nine individuals total, 2002-2011).

DFO data indicate a more substantial by-catch in the Canadian groundfish trawl fishery. Between 2001 and 2011 by-catch was estimated at 11,208 kg (24,710 lbs) total coastwide, and ranged from 81.6 kg (180 lbs) to 1,961 kg (4,324 lbs) per year, with no obvious trend over these dates. Lindley *et al.* (2008) report total Canadian by-catch in the trawl fishery of 24,843 kg[1] (54,655 lb) for the period 1996-2006, with no breakdown by year. Potentially substantial differences in methods of data collection and analysis suggest that trends should not be inferred from the two datasets.

[1]Assuming 80-100 kg for an adult Green Sturgeon (the largest ever recorded was 159 kg) this represents anywhere from 248 - 310 fish.

Threats:

Change in nature and/or severity of threats: yes ☐ no ☒ unk ☐

Explanation:

Data are scarce and there are few data on threats within Canada. Freshwater habitats are thought to be similar to those of White Sturgeon where they co-occur in Canada (e.g., lower Fraser River, BC), but by-catch data indicate a greater use of marine areas in Canada. No substantial change in threats to White Sturgeon in the lower Fraser River are thought to have occurred (COSEWIC 2013). The White Sturgeon is a more carefully studied species in Canada and the US.

Post-release mortality estimates in the trawl fishery are not available (Phaedra Doukakis, NOAA, pers. comm. January 2014 to Todd Hatfield), so the number of Green Sturgeon harmed or directly killed by trawl fishing in Canada each year is unknown.

Both DPSs in the US continue to suffer from habitat loss and degradation. For instance, the Eel River (northern DPS) continues to experience habitat degradation and the Klamath River habitats often experience elevated water temperatures (Adams *et al.* 2007). Habitat in the southern DPS's range

(Sacramento-San Joaquin R., CA) continues to be degraded by multiple factors, the most serious of which are dams, water extraction, invasive species, urbanization, and pollution from agricultural runoff (Adams *et al.* 2007; NOAA 2006, 2012).

Protection:

Change in effective protection: yes ☐ no ☐ unk ☒

Explanation:

Protective measures have increased, but it is difficult to know if these regulatory and conservation changes have been *effective* given that there are no robust data on population sizes or trends across the range (NOAA 2012). For instance, there have been no substantial recent changes in Canadian fishing regulations in fresh water or in marine waters. Also, there have been no substantial changes in mechanisms for effective protection (e g., marine parks or conservation areas) across the species' range in Canada. Amendments to the federal *Fisheries Act* in 2012 (implemented Nov. 2013), however, could result in reduced protection for Green Sturgeon habitat given that it is not the focus of commercial, recreational, or Aboriginal fisheries in Canada. Finally, a management plan that is required for Green Sturgeon given its SARA status as Special Concern (Schedule 1) has yet to been developed. In US waters, however, retention of Green Sturgeon by-catch in Washington, Oregon, and California has been banned since 2007 (except for coastal fisheries in Oregon), the northern (Species of Concern) and southern (Threatened) DPSs have been officially listed under the US *Endangered Species Act* (NOAA 2012), critical habitat has been identified for the southern DPS, and the recreational fishery in California has now been closed. Both in the case of Columbia River and Yurok Tribal fisheries, reduced reported catches of Green Sturgeon may be interpreted as reflecting more effective protection. Consequently, effective protection may have increased in US portions of the range. Given the importance of the worldwide trade in sturgeon caviar, the Green Sturgeon is now also protected under CITES Appendix II (NOAA 2012).

Rescue Effect:

Change in evidence of rescue effect: No yes ☐ no ☒

Explanation:

Reproduction is believed to occur entirely in US.

Quantitative Analysis:

Change in estimated probability of extirpation: yes ☐ no ☒ unk ☐

Explanation:

There has been no quantitative study of extinction risk in Canada.

Summary and Additional Considerations: [e.g., recovery efforts]

Most recent data are related to movement/migration patterns (e.g., Huff *et al.* 2011, 2012; Lindley *et al.* 2008, 2011), although there seems to be increasing interest in the species as indicated by a number of recent scientific papers on Green Sturgeon. A management plan for the Green Sturgeon (SARA Schedule 1 Special Concern) has not yet been developed.

Acknowledgements and authorities contacted:

Christie Whelan, DFO

Courtney Druce, DFO

Ted Down, British Columbia Ministry of Environment

Troy Nelson, Fraser River Sturgeon Conservation Society

Sean MacConnachie, DFO

John K. Davidson, DFO

Information sources:

Adams, P., C. Grimes, J. Hightower, S. Lindley, M. Moser, and M. Parsley. 2007. Population Status of North American Green Sturgeon, *Acipenser medirostris*. Environmental Biology of Fishes 79:339-356.

Beamesderfer, R., M. Simpson, and G. Kopp. 2007. Use of life history information in a population model for Sacramento green sturgeon. Environmental Biology of Fishes 79:315-337.

Bellman, M. A., E. Heery, and J. Majewski. 2010. Observed and Estimated Total Bycatch of Green Sturgeon in the 2002-2008 U.S. West Coast Groundfish Fisheries. West Coast Groundfish Observer Program. NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

COSEWIC. 2013. Update COSEWIC status report on the White Sturgeon *Acipenser transmontanus* in Canada. Draft document.

Huff, D. D., S. T. Lindley, P. S. Rankin, and E. A. Mora. 2011. Green Sturgeon Physical Habitat Use in the Coastal Pacific Ocean. PLoS ONE 6:e25156.

Huff, D. D., S. T. Lindley, B. K. Wells, and F. Chai. 2012. Green Sturgeon Distribution in the Pacific Ocean Estimated from Modeled Oceanographic Features and Migration Behavior. PLoS ONE 7:e45852.

Lindley, S. T., M. L. Moser, D. L. Erickson, M. Belchik, D. W. Welch, E. L. Rechisky, J. T. Kelly, J. Heublein, and A. P. Klimley. 2008. Marine Migration of North American Green Sturgeon. Transactions of the American Fisheries Society 137:182-194.

Lindley, S. T., D. L. Erickson, M. L. Moser, G. Williams, O. P. Langness, B. W. McCovey, M. Belchik, D. Vogel, W. Pinnix, J. T. Kelly, J. C. Heublein, and A. P. Klimley. 2011. Electronic Tagging of Green Sturgeon Reveals Population Structure and Movement among Estuaries. Transactions of the American Fisheries Society 140:108-122.

Moser, M. and S. Lindley. 2007. Use of Washington Estuaries by Subadult and Adult Green Sturgeon. Environmental Biology of Fishes 79:243-253.

NOAA 2006. Endangered and Threatened Wildlife and Plants: Threatened Status for Southern Distinct Population Segment of North American Green Sturgeon. US Department of Commerce, Federal Register 17-17757. Available at http://www.nmfs.noaa.gov/pr/pdfs/fr/fr71-17757.pdf

NOAA Fisheries. 2012. Office of protected resources. http://www.nmfs.noaa.gov/pr/species/fish/greensturgeon.htm Website accessed: 23 October, 2012.

TECHNICAL SUMMARY

Acipenser medirostris

Green Sturgeon Esturgeon vert

Range of occurrence in Canada: British Columbia, Pacific Ocean

Demographic Information

Generation time (usually average age of parents in the population; indicate if another method of estimating generation time indicated in the IUCN guidelines (2008) is being used)	27-33 yrs
Is there an [observed, inferred, or projected] continuing decline in number of mature individuals? - Enumeration of adults is likely easiest in spawning streams of OR and CA, but there is no consistent and coordinated monitoring of abundance and trends. Some inference is possible from by-catch monitoring in marine fisheries or from in-river fisheries (see Adams *et al.* 2007) and indicate a positive trend, but the relationship is weak and complicated by changes to fishing regulations.	No
Estimated percent of continuing decline in total number of mature individuals within [5 years or 2 generations]	Unknown
[Observed, estimated, inferred, or suspected] percent [reduction or increase] in total number of mature individuals over the last [10 years, or 3 generations].	Unknown
[Projected or suspected] percent [reduction or increase] in total number of mature individuals over the next [10 years, or 3 generations]. In the US, there is greater concern for the southern distinct population segment (DPS), which spawns in Sacramento River, CA, where it is considered likely to become an endangered species in the foreseeable future. The northern DPS is not considered to be in danger of extinction or likely to become an endangered species in the foreseeable future (Adams *et al.* 2007).	Unknown
[Observed, estimated, inferred, or suspected] percent [reduction or increase] in total number of mature individuals over any [10 years, or 3 generations] period, over a time period including both the past and the future.	Unknown
Are the causes of the decline clearly reversible and understood and ceased? The largest historical influence was a commercial fishery for White Sturgeon in the late 1800s, in which Green Sturgeon were likely by-catch. Green Sturgeon harvest is now mostly by-catch in White Sturgeon commercial and sport fisheries, Klamath Tribal salmon gill-net fisheries, and coastal groundfish trawl fisheries both in Canada and the US. Fishing and retention regulations have changed considerably toward conservation in US and Canada, over both recent and historical time frames. (Adams *et al.* 2007; Lindley *et al.* 2008).	Not applicable; no evidence of declines.

Are there extreme fluctuations in number of mature individuals? Data are limited, but extreme fluctuations in abundance are unlikely given the long lifespan, and based on by-catch and in-river catch data.	Unlikely

Extent and Occupancy Information

Estimated extent of occurrence Estimate from COSEWIC 2004	~500 000 km^2
Index of area of occupancy (IAO) (Always report 2x2 grid value). Assuming fish spawn along full length of accessible portions of Sacramento, Rogue, Umpqua, and (possibly) Eel river systems in US: 12,000 – 30 000 km^2 (based on marine distribution)	< 2,000 km^2 or less based on spawning distribution
Is the population severely fragmented?	No
Number of locations* Spawning areas are known only from the US and the species is divided into two distinct population segments (DPS, similar to designatable units) in the United States. Southern DPS: one spawning river (Sacramento River, CA, system) Northern DPS: three spawning rivers (Klamath R., CA/OR, Rogue and Umpqua rivers, OR, possibly also in the Eel River, CA, Adams *et al.* 2007) *Marine overwintering "hotspots": at least three broad areas including, Haida Gwaii, northern Vancouver Island, and southwestern Vancouver Island (Huff *et al.* 2012). Areas where concentrated fishing (by-catch) occurs are numerous coastwide and would result in > 10 locations.	3-4 (at least three in Canada*, and three-four in US)
Is there an [observed, inferred, or projected] continuing decline in extent of occurrence? Distribution maps in Huff *et al.* (2012) extend the marine distribution both northward and southward from earlier distribution estimates; however, habitat suitability modelling identifies restricted "hotspots" within this extended range.	No
Is there an [observed, inferred, or projected] continuing decline in index of area of occupancy? Not in terms of spawning areas.	No
Is there an [observed, inferred, or projected] continuing decline in number of populations? However, the southern DPS is Threatened under the US *Endangered Species Act* while the northern DPS is a Species of Concern.	No

* See Definitions and Abbreviations on COSEWIC website and IUCN 2010 for more information on this term.

Is there an [observed, inferred, or projected] continuing decline in number of locations*? No; however, data are limited.	No
Is there an [observed, inferred, or projected] continuing decline in [area, extent and/or quality] of habitat? Broad trends are likely negative, given understanding from other land and water use studies. Freshwater habitat (spawning and early rearing) is threatened primarily by water use (extraction, dams, diversion, flow regulation) and land use (sediment) and pollution (effluent discharges), in US spawning rivers (no spawning known in Canada). Marine areas and estuaries in Canada and the US are affected by fishing and land use.	Likely
Are there extreme fluctuations in number of populations? However, data are limited.	No
Are there extreme fluctuations in number of locations*? No; however, data are limited.	No
Are there extreme fluctuations in extent of occurrence? No; however, data are limited.	No
Are there extreme fluctuations in index of area of occupancy? No; however, data are limited.	No

Number of Mature Individuals (in each population)

Population	N Mature Individuals
Probably fewer than 10,000 total	unknown
Total	

Quantitative Analysis

Probability of extinction in the wild is at least [20% within 20 years or 5 generations, or 10% within 100 years].	Not available

Threats (actual or imminent, to populations or habitats)

The largest historical influence was a commercial fishery for White Sturgeon in the late 1800s, in which Green Sturgeon were subject to by-catch.

Green Sturgeon harvest is now mostly by-catch in White Sturgeon commercial and sport fisheries, Klamath Tribal (US) salmon gill-net fisheries, and coastal groundfish trawl fisheries both in Canada and the US. Fishing and retention regulations have changed considerably toward conservation in the US and Canada, over both recent and historical timeframes, but by-catch in fisheries is still considered to represent a threat. For example, Green Sturgeon are likely caught in low numbers in the lower Fraser River catch and release recreational fishery for White Sturgeon. By regulation both species of sturgeon must be released.

There are very few records in Canadian freshwaters and all are from by-catches in various fisheries, but poor water quality from effluent discharge is likely a threat in the lower Fraser River. In the US, freshwater habitat (spawning and early rearing) is threatened primarily by water use (extraction, dams, diversions, flow regulation) and land use (sediment) and pollution (effluent discharges). Marine areas and estuaries are affected by fishing (by-catch and habitat disturbance from trawl fishery) and land use (sediment) and pollution (effluent discharges).

Rescue Effect (immigration from outside Canada)

Status of outside population(s)? Two distinct population segments (DPSs) are recognized in the US. The status of the southern DPS is Threatened, and the status of the northern DPS is Species of Concern, under the US *Endangered Species Act*. Occurrences in Canada are likely mostly fish from the northern DPS.	
Is immigration known or possible?	Population in Canada is assumed to be entirely dependent on spawning in US rivers
Would immigrants be adapted to survive in Canada? However, there is no confirmed spawning in Canada.	Yes
Is there sufficient habitat for immigrants in Canada? Yes; however, there is no confirmed spawning in Canada.	Yes (for marine component of life history)
Is rescue from outside populations likely? The concept of rescue effect is difficult to apply to this species: all spawning is believed to occur in the US, and a substantial portion of the marine rearing habitat is in Canada.	Probably

Data-Sensitive Species

Is this a data-sensitive species?

Probably not, because individuals occur in offshore marine areas in Canada and there are only occasional records in freshwater (e.g., Fraser River).

Status History:

Designated Special Concern in April 1987. Status re-examined and confirmed in November 2004 and November 2013.

Status and Reasons for Designation:

Status: Special Concern	**Alpha-numeric Code:** NA
Reason for Designation: This is a large-bodied fish species that is slow to grow and mature. The number of individuals in Canadian waters is unknown, but is undoubtedly not large. This species is globally at risk, and known threats are fisheries by-catch both in Canada and the United States, and habitat loss and degradation owing to water extraction, industrial and recreational development, and construction of dams in the United States where all known spawning locations are found.	
Criterion A: Not applicable. No evidence of declines.	
Criterion B: Not applicable. Nearly meets sub-criterion a,b(iii) because the number of known spawning locations is 3-4 and the overwintering locations is approximately 3; however, exceeds the threshold for EO and IAO.	
Criterion C: Not applicable. Population sizes unknown and no evidence of declines.	
Criterion D: Not applicable. Population sizes unknown; area exceeds criteria.	
Criterion E: Not applicable. Data needed to assess criterion are not available.	

Information sources

Adams, P., C. Grimes, J. Hightower, S. Lindley, M. Moser, and M. Parsley. 2007. Population Status of North American Green Sturgeon, *Acipenser medirostris*. Environmental Biology of Fishes 79:339-356.

Beamesderfer, R., M. Simpson, and G. Kopp. 2007. Use of life history information in a population model for Sacramento green sturgeon. Environmental Biology of Fishes 79:315-337.

Bellman, M. A., E. Heery, and J. Majewski. 2010. Observed and Estimated Total Bycatch of Green Sturgeon in the 2002-2008 U.S. West Coast Groundfish Fisheries. West Coast Groundfish Observer Program. NWFSC, 2725 Montlake Blvd E., Seattle, WA 98112.

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NOAA Fisheries. 2012. Office of protected resources. http://www.nmfs.noaa.gov/pr/species/fish/greensturgeon.htm Website accessed: 23 October, 2012.

Moser, M. and S. Lindley. 2007. Use of Washington Estuaries by Subadult and Adult Green Sturgeon. Environmental Biology of Fishes 79:243-253.

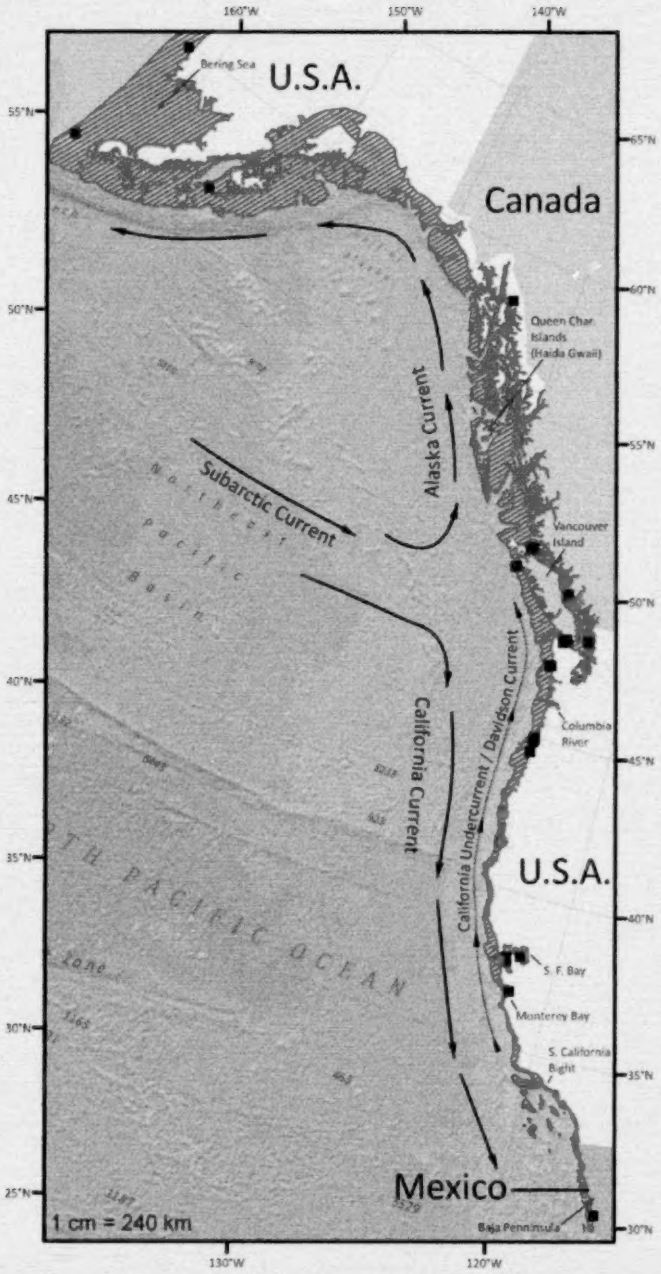

Fig. 1. Map of the distribution of Green Sturgeon (*Acipenser medirostris*) along the Pacific Coast of North America (from Huff *et al.* 2012). The green hatched area shows the area where Green Sturgeon has been recorded to the 200 m depth isobath, black squares are Green Sturgeon occurrence records used by Huff *et al.*'s (2012) habitat modelling, red dots indicate mouths of major spawning rivers, and yellow triangles represent major overwintering areas.

COSEWIC HISTORY

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) was created in 1977 as a result of a recommendation at the Federal-Provincial Wildlife Conference held in 1976. It arose from the need for a single, official, scientifically sound, national listing of wildlife species at risk. In 1978, COSEWIC designated its first species and produced its first list of Canadian species at risk. Species designated at meetings of the full committee are added to the list. On June 5, 2003, the *Species at Risk Act* (SARA) was proclaimed. SARA establishes COSEWIC as an advisory body ensuring that species will continue to be assessed under a rigorous and independent scientific process.

COSEWIC MANDATE

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses the national status of wild species, subspecies, varieties, or other designatable units that are considered to be at risk in Canada. Designations are made on native species for the following taxonomic groups: mammals, birds, reptiles, amphibians, fishes, arthropods, molluscs, vascular plants, mosses, and lichens.

COSEWIC MEMBERSHIP

COSEWIC comprises members from each provincial and territorial government wildlife agency, four federal entities (Canadian Wildlife Service, Parks Canada Agency, Department of Fisheries and Oceans, and the Federal Biodiversity Information Partnership, chaired by the Canadian Museum of Nature), three non-government science members and the co-chairs of the species specialist subcommittees and the Aboriginal Traditional Knowledge subcommittee. The Committee meets to consider status reports on candidate species.

DEFINITIONS
(2013)

Wildlife Species	A species, subspecies, variety, or geographically or genetically distinct population of animal, plant or other organism, other than a bacterium or virus, that is wild by nature and is either native to Canada or has extended its range into Canada without human intervention and has been present in Canada for at least 50 years.
Extinct (X)	A wildlife species that no longer exists.
Extirpated (XT)	A wildlife species no longer existing in the wild in Canada, but occurring elsewhere.
Endangered (E)	A wildlife species facing imminent extirpation or extinction.
Threatened (T)	A wildlife species likely to become endangered if limiting factors are not reversed.
Special Concern (SC)*	A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.
Not at Risk (NAR)**	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.
Data Deficient (DD)***	A category that applies when the available information is insufficient (a) to resolve a species' eligibility for assessment or (b) to permit an assessment of the species' risk of extinction.

* Formerly described as "Vulnerable" from 1990 to 1999, or "Rare" prior to 1990.

** Formerly described as "Not In Any Category", or "No Designation Required."

*** Formerly described as "Indeterminate" from 1994 to 1999 or "ISIBD" (insufficient scientific information on which to base a designation) prior to 1994. Definition of the (DD) category revised in 2006.

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